POST-INITIAL REVIEW EXPOSURE REPORT

Chemical ID: P-19-0138 **Reviewer: Mottl/ND**

This updated assessment is based on the Post Scoping v1 dated 03/31/2020 and Post-Scoping V2 dated 7/17/2020.

Results Table: Dose, Concentration, and Days Exceeded Results Summary

Exposure Scenario[1]	Water						Landfill	Stack Air		Fugitive Air	
Release activity(ies)[2]; exposure calculation(s)[3]	Drinking Water		Fish Ingestion		7Q10[4] CC = 153	PDM Days Exceeded	LADD	ADR (24-hr conc.)	LADD (Annual conc.)	ADR (24-hr conc.)	LADD (Annual conc.)
	ADR	LADD	ADR	LADD							
	mg/kg/day	mg/kg/day	mg/kg/day	mg/kg/day	µg/l	# Days	mg/kg/day	mg/kg/day (µg/m^3)	mg/kg/day (µg/m^3)	mg/kg/day (µg/m^3)	mg/kg/day (µg/m^3)
MFG/PROC/USE:Max ADR	--	--	--	--	--	--	--	**2.07e-5 (1.10e-1)**	**-- (--)**	**4.32e-5 (2.40e-1)**	**-- (--)**
MFG/PROC/USE:Max LADD	--	--	--	--	--	--	--	**-- (--)**	**1.44e-8 (1.86e-4)**	**-- (--)**	**4.66e-8 (6.02e-4)**

[1] Exposure scenario titles consist of release activity followed by exposure calculation abbreviation.
[2] Release activities are from engineering report's Manufacturing (Mfg), Processing (Proc) and Use release activity labels. Multiple release activities are combined in one exposure scenario if their releases occur at same location.
[3] Exposure calculations are Acute Dose Rate (ADR), Lifetime Average Daily Dose (LADD), and Probabilistic Dilution Model (PDM). There may be one, two, or all three exposure calculations per exposure scenario. CC is the aquatic concentration of concern.
[4] This column displays concentration values for the 7Q10 streamflow, which is defined as the average daily streamflow of the seven consecutive days of lowest flow within a ten year period.

Results Table: Exposure Based (XB)/Persistent (P2B2) Criteria

Parameter	Exp Based	Persistent	Exceedance Value
Drinking (Surface) Water Dose (mg/kg/day)	NA	No	--
Fish Ingestion Dose (mg/kg/day)	NA	No	--
Inhalation Dose (mg/kg/day)	NA	No	--
Groundwater Dose (mg/kg/day)	NA	No	--
Surface Water Release After Treatment (kg/yr)	NA	No	--
Total Release After Treatment (kg/yr)	NA	No	--
Consumer Use?	NA		

Fate test recommendations?: (default is NA)

Remarks:

- PB rating(s): PMN – P1B1; Hyd Pdts P3BU, P3B1
- PV: [redacted] kg/year
- MFG/PROC/USE – No releases to water
- The New Chemical substance **was not** evaluated for surface water concentrations; Eco rating: **2** and COC: **153 ppb**.
- Health Hazards: **Dermal/Oral/Inhalation**
  - Drinking Water estimates were not assessed because **there are no water releases in the Engineering Report.**
  - Fish Ingestion estimates were not assessed because **there are no water releases in the Engineering Report** and **the BCF is unknown.**
  - No releases to Landfill.
- Consumer exposure to the New Chemical substance **is not expected**

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ENVIRONMENTAL RELEASES

Scenario#:1 Number of Release Sites: [redacted]

Release Activity: MFG/PROC/USE:Max ADR

Release Description:	WATER	LANDFILL Non-sludge/Sludge	STACK	FUGITIVE
Total Releases:	N/A	N/A	[redacted]	[redacted]
	(kg/yr)	(kg/yr)	(kg/yr)	(kg/yr)
		Non-sludge/Sludge		
Release Days/yr:	N/A	0.00/0.00	[redacted]	[redacted]
Per Site Release:	N/A	N/A/0.00	[redacted]	[redacted]
	(kg/site/day)	(kg/site/day)	(kg/site/day)	(kg/site/day)

Remarks:

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INHALATION EXPOSURE ESTIMATES (POST-TREATMENT)

SCENARIO #: 1 RELEASE ACTIVITY:MFG/PROC/USE:Max ADR

RELEASE DESCRIPTION:

METHOD OF CALCULATION: Screen3

EXPOSED POPULATION: Adult

Number of Sites:	[redacted]	
Per Site Fugitive Release:	[redacted]	kg/site/day
Fugitive Release Days per Year:	[redacted]	days
% Removal via Fugitive Release:	0.00	%
Total Fugitive Release:	[redacted]	kg/yr
Max Annual Average Air Concentration (Fugitive):	[redacted]	µg/m^3
Max 24 Hour Average Air Concentration(Fugitive):	0.24	µg/m^3
Per Site Stack Release:	[redacted]	kg/site/day
Stack Release Days per Year:	[redacted]	days
% Removal via Stack Release:	99.99	%
Total Stack Release:	[redacted]	kg/yr
Max Annual Average Air Concentration (Stack):	[redacted]	µg/m^3
Max 24 Hour Average Air Concentration (Stack):	0.11	µg/m^3

Exposure Units	Results (Stack)	Results (Fugitive)	ASSUMPTIONS			
			ED (years)	AT (years)	BW (kg)	Inh. Rate (m^3/hr)
Cancer						
$LADD_{pot}$ (mg/kg/day)	1.44E-08	2.41E-08	33.00	78.00	80.00	0.61
$LADC_{pot}$ (mg/m^3)	7.87E-08	1.32E-07	33.00	78.00	NA	NA
Acute						
ADR_{pot} (mg/kg/day)	2.07E-05	4.32E-05	NA	1 day	80.00	0.61

Inhalation Comments:

Stack Parameter Data			Fugitive Parameter Data		
Stack Height	10.00	m	Release Height:	3.00	m
Inside Stack Diameter:	0.10	m	Length of Release Opening:	10.00	m
Stack Gas Exit Velocity:	0.10	m/sec	Width of Release Opening:	10.00	m
Stack Gas Temperature:	293.00	K			

Meteorological and Terrain Information:

Surrounding Land Use:	Rural	
Terrain Height:	0.00	m
Distance to Residence of Interest:	100.00	m
Meteorological Class:	Full	
Stability Class:	NA	
Wind Speed:	NA	

Downwash Information:

Facility Length:	NA	m
Facility Width:	NA	m
Facility Height:	NA	m

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ENVIRONMENTAL RELEASES

Scenario#:2 Number of Release Sites: [redacted]

Release Activity: MFG/PROC/USE:Max LADD

Release Description:	WATER	LANDFILL Non-sludge/Sludge	STACK	FUGITIVE
Total Releases:	N/A	N/A	[redacted]	[redacted]
	(kg/yr)	(kg/yr)	(kg/yr)	(kg/yr)
		Non-sludge/Sludge		
Release Days/yr:	N/A	0.00/0.00	[redacted]	[redacted]
Per Site Release:	N/A	N/A/0.00	[redacted]	[redacted]
	(kg/site/day)	(kg/site/day)	(kg/site/day)	(kg/site/day)

Remarks:

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INHALATION EXPOSURE ESTIMATES (POST-TREATMENT)

SCENARIO #: 2 RELEASE ACTIVITY:MFG/PROC/USE:Max LADD

RELEASE DESCRIPTION:

METHOD OF CALCULATION: Screen3

EXPOSED POPULATION: Adult

Number of Sites:	[redacted]	
Per Site Fugitive Release:	[redacted]	kg/site/day
Fugitive Release Days per Year:	[redacted]	days
% Removal via Fugitive Release:	0.00	%
Total Fugitive Release:	[redacted]	kg/yr
Max Annual Average Air Concentration (Fugitive):	[redacted]	µg/m^3
Max 24 Hour Average Air Concentration(Fugitive):	N/A	µg/m^3
Per Site Stack Release:	[redacted]	kg/site/day
Stack Release Days per Year:	[redacted]	days
% Removal via Stack Release:	99.99	%
Total Stack Release:	[redacted]	kg/yr
Max Annual Average Air Concentration (Stack):	[redacted]	µg/m^3
Max 24 Hour Average Air Concentration (Stack):	N/A	µg/m^3

Exposure Units	Results (Stack)	Results (Fugitive)	ASSUMPTIONS			
			ED (years)	AT (years)	BW (kg)	Inh. Rate (m^3/hr)
Cancer						
$LADD_{pot}$ (mg/kg/day)	1.44E-08	4.66E-08	33.00	78.00	80.00	0.61
$LADC_{pot}$ (mg/m^3)	7.87E-08	2.55E-07	33.00	78.00	NA	NA
Acute						
ADR_{pot} (mg/kg/day)	N/A	N/A	NA	1 day	80.00	0.61

Inhalation Comments:

Stack Parameter Data			Fugitive Parameter Data		
Stack Height	10.00	m	Release Height:	3.00	m
Inside Stack Diameter:	0.10	m	Length of Release Opening:	10.00	m
Stack Gas Exit Velocity:	0.10	m/sec	Width of Release Opening:	10.00	m
Stack Gas Temperature:	293.00	K			

Meteorological and Terrain Information:

Surrounding Land Use:	Rural	
Terrain Height:	0.00	m
Distance to Residence of Interest:	100.00	m
Meteorological Class:	Full	
Stability Class:	NA	
Wind Speed:	NA	

Downwash Information:

Facility Length:	NA	m
Facility Width:	NA	m
Facility Height:	NA	m